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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,696	01/05/2001	Hiroshi Saeki	NEC 2020	4001

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EXAMINER

DONG, DALEI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,696

Applicant(s)

SAEKI, HIROSHI

Examiner

Dalei Dong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 7 and 8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected the method for manufacturing a plasma display panel, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 20, 2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,938,494 to Betsui in view of U.S. Patent No. 5,797,780 to Peng.

Regarding to claim 1, Betsui discloses in Figure 3, an apparatus for manufacturing a plasma display panel having an inside and comprising a joining chamber that forms a plasma display panel by joining a front substrate (11) and a rear substrate (21) by heating a low-melting-point glass (12) and a gas introduction and a sealing chamber which introduces a luminescent gas (gas composition as shown in Figures 4A-4C) into the plasma display panel which is formed by the joining chamber via a gas introduction port provided in the front substrate or the rear substrate (shown in Figures 4A-4C), and seal

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the gas introduction port, the manufacturing apparatus further comprising: a first mechanism (51) for supplying a cover member formed by a metal sheet to which low-melting-point glass is applied to a first location within the gas introduction and sealing chamber, a second mechanism (transfer means between chambers) provided in the gas introduction and sealing chamber for moving the cover member from the first location to a second location which is over a heating apparatus, a third mechanism (54) provided in the gas introduction and sealing chamber for performing vacuum exhausting the inside of the plasma display panel and introducing a luminescent gas into the plasma panel.

Applicant further claims the third mechanism in the gas introduction and sealing member is adapted to perform vacuum exhausting (56), at least, before the fourth mechanism in the gas introduction and sealing chamber is used to melt the low-melting-point glass is merely an intended use and the functionality of the third mechanism wherein it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987) (see MPEP 2112).

However, Betsui does not disclose a fourth mechanism provided in gas introduction and sealing chamber for heating the metal sheet to which the low-melting-point glass is applied by using the heating apparatus, so that the gas introduction port is sealed by the low-melting-point glass. Peng teaches in Figure 3, a fourth mechanism provided in the gas introduction sealing chamber for heating the metal sheet to which the low-melting-point glass (18) is applied by using the heating apparatus (21), so that the

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gas introduction port (9) is sealed by the low-melting-point glass (18) (see column 3, line 62 to column 4, line 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have add the hybrid sealing process and apparatus of Peng to the manufacturing process of Betsui in order to effectively seal the introduction/exhaust port and to achieving high vacuum after sealing without the use of high cost and low throughput vacuum oven or furnace and further eliminate contaminations within the plasma display.

Regarding to claim 3, Betsui discloses in Figure 3, the plasma display panel in which the front substrate (11) is fixed to the rear substrate (21) is placed within the joining chamber (54), and the joining chamber (54) is vacuum-exhausted (56) and the front substrate (11) and the rear substrate (12) are joined by the low-melting-point glass (12).

Regarding to claim 4, Betsui discloses in Figure 3, the joining chamber and the gas introduction chamber are a single chamber (54).

Regarding to claim 5, Betsui discloses in Figure 3, a luminescent gas introduction system and gas exhaust system (56) are provided in the gas introduction and sealing chamber, and luminescent gas introduction system and the gas exhaust system are

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communicating with the gas introduction/exhaust path provided inside the second member.

Regarding to claim 6, Betsui discloses in Figure 3, the second member is brought into intimate contact with the plasma display panel.

Allowable Subject Matter

4. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record taken alone or in combination fails to teach or suggest a first member movable up and down disposed within the gas introduction and sealing chamber, and a second member movable up and down which is surrounded by the first member are provided, the fourth mechanism is provided on the second member, and the third mechanism is provide in the first member in order to manufacture a plasma display panel, whereby degassing is completed in a short amount of time, with a small amount of residual gas.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art are cited to further show the state of the art of composition of a manufacturing apparatus of a plasma display panel.

U.S. Patent No. 5,876,260 to Pepi.

U.S. Patent No. 6,004,181 to Robinson.

U.S. Patent No. 6,186,722 to Shirai.


U.S. Patent No. 6,719,516 to Kroeker.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D.D.

December 9, 2004



Joseph Williams
Primary Examiner
Art Unit 2879